

What is claimed is:

1 1. A system for providing information to a stored program operating
2 on a computer coupled to a device connected to a network, the device comprising:
3 at least one input port for receiving information from a source coupled to
4 the network;
5 at least one output port for providing the information from the source to a
6 destination, the computer being coupled to receive information addressed to the computer
7 from the output port;
8 a flow control table for storing entries which each include:
9 source addresses representative of at least one source of
10 information arriving at the input port;
11 destination addresses representative of at least one of the
12 destinations to which the arriving information is to be sent from the output port; and
13 action information for each address which action information
14 includes at least one reference to the stored program; and
15 wherein the computer coupled to receive information from the output port
16 receives information addressed to it and uses the received information in execution of the
17 stored program.

1 2. A system as in claim 1 wherein the action information includes
2 default priority information used to control information which does not otherwise have an
3 entry in the flow control table.

1 3. A system as in claim 2 wherein the system includes a switch for
2 switching information and a controller coupled to the switch for storing the flow control
3 table and controlling the switch in response thereto.

1 4. A system as in claim 3 wherein the switch comprises a router and
2 the flow control table is maintained by a controller in the router.

1 5. A system as in claim 4 wherein the router controller is itself
2 controlled by a computer.

1 6. A system as in claim 3 wherein the router controller manages the
2 flow control table using an applications program interface.

1 7. A system as in claim 2 wherein the system comprises an IP router.

1 8. A system as in claim 2 wherein the system comprises an IP switch.

1 9. A system as in claim 1 wherein the action information in flow
2 control table is established by an applications program interface which communicates
3 with the system.

1 10. A system as in claim 9 wherein the applications program interface
2 employs an argument which includes an "if" portion for determining the origin of the
3 source of received information, and a "then" portion for specifying handling of the
4 received information.

1 11. A system as in claim 10 wherein the then portion includes a
2 reference to the stored program.

1 12. A system as in claim 11 wherein the then portion further includes a
2 parameter to be supplied to the stored program.

1 13. A system as in claim 11 wherein the then portion further includes a
2 location at which the stored program is to be executed.

1 14. A system as in claim 1 wherein the stored program is used to
2 manage a network.

1 15. A method for providing information to a stored program operating
2 on a computer coupled to an output port of a device in a network, the method comprising:
3 providing the information to the network in a format which includes
4 address information to direct the information to the device;
5 in the device, storing a flow control table which has entries which each
6 include source addresses representative of at least one source of information arriving at
7 the device, destination addresses representative of at least one of the destinations to which

the arriving information is to be sent from the output port, and action information for each destination address; and

wherein the action information in the flow control table includes at least one program reference, and wherein the computer coupled to receive information from the output port receives information addressed to it and uses the received information in execution of the stored program.

16. A method as in claim 15 wherein the action information includes default information used to control information which does not otherwise have an entry in the flow control table.

17. A method as in claim 15 further including a step of using the computer to control the switching system.

18. A method as in claim 17 wherein the computer is used to control a network.

19. A device adapted for connection to a network, the device for providing information to a stored program operating on a computer coupled to the device, the device comprising:

at least one input port for receiving information from a source;

at least one output port for providing the information from the source to a destination;

a flow control table for storing entries which each include:

source addresses representative of at least one source of information arriving at the input port;

destination addresses representative of at least one of the destinations to which the arriving information is to be sent from the output port; and

action information for each address which action information includes at least one reference to the stored program; and

wherein information from the output port is transmitted to the computer for use in execution of the stored program.

20. A device as in claim 19 wherein the source comprises a source of information coupled to the network.

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1 21. A device as in claim 20 wherein the computer is directly connected
2 to the output port.

1 22. A device as in claim 19 wherein the action information includes
2 default priority information used to control information which does not otherwise have an
3 entry in the flow control table.

1 23. A device as in claim 19 wherein the device includes a switch for
2 switching information based on the destination addresses, and a controller coupled to the
3 switch for storing the flow control table and controlling the switch in response thereto.

1 24. A device as in claim 23 wherein the switch comprises a router.

1 25. A device as in claim 24 wherein the controller is itself controlled
2 by a computer.

1 26. A device as in claim 23 wherein the controller manages the flow
2 control table using an applications program interface.

1 27. A device as in claim system as in claim 23 wherein the action
2 information in the flow control table is established by an applications program interface
3 which communicates with the device.

1 28. A device as in claim 27 wherein the applications program interface
2 employs an argument which includes an "if" portion for determining the origin of the
3 source of received information, and a "then" portion for specifying handling of the
4 received information.

1 29. A device as in claim 28 wherein the "then" portion includes a
2 reference to the stored program.

1 30. A device as in claim 29 wherein the "then" portion further includes
2 a parameter to be supplied to the stored program.

1 31. A device as in claim 30 wherein the "then" portion further includes
2 a location at which the stored program is to be executed.

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- 1 32. A device as in claim 19 wherein the stored program is used to
2 manage the network.

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